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ABSTRACT

It was hypothesized that if perceived reality is an important factor in determining children's reactions to television, radical differences in the structure of perceived reality should lead to radical differences in its functioning as well. Questionnaires were answered by 153 children from first, third, and sixth grades in a suburban Wisconsin community and 33 children from a university nursery school in California. The research demonstrated that children's conceptions of television's reality are multi-dimensional. Therefore, instead of assuming that perceived reality acts and is acted on in only one way, future research must take this cognitive complexity into account. (RB)

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The Dimensional Structure of Children's Perceptions of Television Reality

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CS 501 305

The Dimensional Structure of Children's

Perceptions of Television's Reality

RPH: If you could reach inside your tv set, could you touch the people and things you see?
L: No, 'cause the set would break. And besides, all the people on tv are dead.
RPH: They are? How do you know that?
L: My father's a scientist and he knows everything, and he said tv used to be live but it's not any more, so that's how I know they're all dead.

Television plays a large role in the everyday lives of American children, with the average child spending between two and four hours of television viewing daily (Lyle, 1972; Lyle & Hoffman, 1972b). Given so much exposure, it should come as no surprise that researchers have been able to document a wide variety of television effects. Gerbner and Gross (1974) compared attitudes of heavy and light television viewers and found an apparent "television bias" among heavy viewers in their estimation of such real world characteristics as population density, employment, crime, and law enforcement. Other evidence indicates television's influence on intellectual development (Ball & Bogatz, 1970, 1973; Bogatz & Ball, 1971), attitudes and stereotypes (Alper & Leidy, 1970; Atkin & Miller, 1975; Pingree, 1975; Roberts, et al., 1974), and prosocial behavior (Stein & Friedrich, 1972), but the strongest evidence of television's influence on behavior comes from research relating violent television content and aggressive behavior by children. The results of a series of NIMH-supported studies led Jesse Steinfeld, the former Surgeon General, to state, "These studies . . . make it clear to me that the relationship between televised violence and anti-social behavior is sufficiently proved to warrant immediate remedial action" (Steinfeld, 1973).

Now that these various effects are reasonably well established, the next task has seemed to be determining how to take remedial action (in the case of violence or socially harmful stereotypes) or how to enhance and encourage desirable effects on intellectual development or prosocial behavior. Aside from major institutional and content reforms in the television industry, hopes for remedial or enhancing action must lie in the identification of other variables that can intervene in television effects. Stated somewhat differently, a possible approach along these lines would be to isolate some process or processes involved in television effects and then find ways in which the working of that process can be altered. Past research has delineated many characteristics of children, television, and interpersonal and societal context that can make a difference in the acquisition and performance of television behavior, such as developmental stage, plot complexity, and socioeconomic status (Leifer, Gordon, & Graves, 1973). However, since many of these are not readily manipulable, we have often increased our understanding without greatly increasing our power to intervene in the child-television relationship. Of the much smaller subset of intervening variables that hold out some promise of fulfilling both goals, one, children's perception of television's reality, has seemed an especially good candidate and has stimulated much hope and considerable research.

The ability to distinguish between reality and fantasy in television content has been hypothesized to act by increasing involvement with and relevance of television content. In either case, to the extent that we perceive television's content to be a realistic portrayal of life, we may be more affected by and learn more from that content. Evidence for the processes by which perceived reality works is more sparse than evidence that it does work, but two surveys with British children linked perceiving television programs as more real with greater fright and involvement. Furthermore, there is some reason to believe that recall of more involving scenes is better (e.g., Holaday & Stoddard, 1933; Maccoby & Wilson, 1957; Osborn & Endsley, 1971).

In their correlational study of adolescents, McLeod et al. (1972) report that perceived reality was clearly related to higher levels of aggression and, to a lesser extent, violence viewing. Perceived reality also correlated with learning of and involvement in aggressive content. Osborn and Endsley's (1971) four- and five-year-olds registered higher GSR-measured emotional responses to human-violence than to cartoon-violence films, and Noble (1973) found that six- and seven-year-olds played significantly less constructively and more destructively after viewing "realistically" rather than "stylistically" filmed aggression.

Given the above relationships, perceived reality seems even more important in light of a number of findings suggesting that recognition of television as not necessarily real and the ability to keep the reality-fantasy distinction in mind while viewing television are age-related developments. An early study with six-year-old to adult subjects (Dysinger & Rucknick (1933) found decreases in GSR-measured arousal to scenes of "danger" in motion picture with age, a result they attribute to (among other things) an increasing ability to discredit the reality of the scene -- the development of adult discount. Surveys investigating television viewing behavior and its correlates suggest that very young children may not understand the nature of television itself, i.e., they don't know "where the people go when the television is turned off" (Lyle & Hoffman, 1972a). While there is a major increase in comprehension between ages three and four, even five-year-olds do not provide realistic answers to this question. In this same study and another by Lyle and Hoffman (1972b), most children up through first grade felt that children on television were "pretty much" or "just like" real life, and as many as 37% of the sixth graders and 25% of the tenth graders thought that television people were like real people "most of the time."

More direct tests of perceived reality as an intervening variable come from several studies that attempted to directly manipulate the reality-fantasy distinction. Gordon (1973) showed fifth and sixth grade boys aggressive scenes labeled as set in the past, present, or future. Scenes labeled present were enjoyed more and seen as more realistic, but the same aggressive action was seen as less

acceptable in the present context. Feshbach (1972) told nine to eleven-year-old children that the same film was either a Hollywood movie or a newsreel, and found that reality-set children behaved more aggressively on an aggression machine than fantasy-set subjects. Control subjects who saw no film were in between the two experimental groups in aggression. Berkowitz and Alioto (1974) also found that college-age subjects believing the content of a video presentation to be real were subsequently more aggressive than those who believed it to be fantasy. From these studies, then, it appears that the potential antisocial effects of television are likely to be stronger when the content is perceived as like real life, and weaker when it is seen as fantasy.

However, a recent study by Pingree (1975), in which nine- and fourteen-year-olds viewed television commercials showing either traditional women as wives and mothers or nontraditional women in occupations usually held by men, casts some doubt on the above interpretation of perceived reality's role. As in Feshbach, Pingree varied the reality of the sets of commercials by telling participants that the characters were either actors (acting-set) or real people (reality-set). Paper and pencil measures of perceived reality indicated that this manipulation was successful; furthermore, children displayed less stereotyped attitudes toward women after viewing nontraditional women than after viewing traditional women.

It is in the interaction of perceived reality set and type of women presented that previous expectations about perceived reality begin to break down. Feshbach's (1972) explanation (the one that has motivated nearly all research on perceived reality) predicts an interaction: if perceiving a stimulus as real heightens and perceiving it as fantasy weakens the effect, the difference in children's attitudes between the two stimulus types should be greater under reality-set than under fantasy-set conditions. Instead, the acting-set manipulation produced less traditional attitudes about women regardless of the content viewed. This main effect of the manipulation of perceived reality is supported by a correlation of attitudes about women with reported perceptions of television reality. Overall and within individual cells of the design, disbelief in the reality of television is significantly related

to less traditional attitudes. It would seem, therefore, that the attempt to manipulate children's perceived reality of television actually produced a generalized "criticalness" that was applied both to television and to beliefs about women's role.

Further research will be needed to determine whether these different conclusions are due to the difference between sex role attitudes and aggression, paper and pencil and behavioral measures, or the number of stimulus films used (Pingree's results for traditional women taken alone are analogous to Feshbach's results). Understanding and using perceived reality may be somewhat more complicated than originally thought; however, these experimental manipulations do make clear that perceived reality is a variable of some importance for children's reactions to television stimuli.

While researchers have been actively exploring the role of perceived reality, relatively little effort has gone toward an explication of the concept. Items measuring perceived reality have usually been assumed to have validity, and have been as disparate as "Where do people on your TV go when your TV is turned off?" (Lyle & Hoffman, 1972a), "Black people on TV are just like Black people in real life" (Greenberg & Reeves, 1974), and "Some stories remind me of frustrating things that have happened to me" (McLeod, et al., 1972). These and the many other items measuring perceived reality all have some claim to legitimacy and all have a certain face validity, but there is enough dissimilarity to make one wonder if perceived reality is a unitary concept at all.

Theoretically, children's conceptions of the reality of television may vary along a number of dimensions that are independent of each other. First, we can conceive of a continuum of reality ranging from perceiving television content as dramatic to seeing it as a "magic window" through which one can look at on-going life. That is, misunderstanding the nature of the television set and thinking that one could reach inside and grasp people or things on the screen (magic window reality).

Independent of whether children view television as dramatic or a magic window, a second dimension might deal with reality from the perspective of children's expectations about life and the world around them, ranging from not fitting with their expectations -- the people on television are not like people experienced or imagined -- to fitting very well with expectations -- television presents accurate pictures of the way the world is (social expectations).

A third dimension (specificity) could exist either independently or as a modifier of either or both of the first two dimensions. That is, one can conceive of children responding differently to questions about television in general, specific types of shows, or specific shows and characters. Greenberg and Reeves (1974) found higher ratings of perceived reality in response to specific questions. It is important to recognize, however, that specificity as a dimension could be an artifact of the kinds of questions asked. For example, what does it really mean to a child to be asked an abstract question about television reality? How differently would an adult respond? It is possible that more specific questions are simply more answerable and thus more meaningful.

A fourth possible way to characterize children's responses to television's reality (context) may be located by whether the child is responding to people on television, events on television, or the usefulness of people and events on television for everyday life. This is not properly a dimension at all, since it contains three discrete categories rather than a single continuum, but it will be convenient to label it as a fourth dimension in what follows. Furthermore, while context is independent of the specificity dimension (people, events, and usefulness can be crossed with varying degrees of specificity), it is not fully independent of "magic window" and social expectations. While people and events can vary in the degree to which the child believes them to be dramatic or in actual existence (magic window) and in the degree to which they conform to expectations (social expectations), usefulness is probably only relevant for social expectations.

As an example of the relevance of context, a child might believe that the people and events on television are pretty much like real life, but not feel that they are very useful for understanding her or his own situation. Thus, the child both has and does not have "adult discount." Such a child could score high on a global perceived reality scale, but not be at all influenced by the content of what was viewed because of feelings about how useful that information might be.

These example dimensions probably do not exhaust the possibilities, but they are not meant to. The above explication of children's perceptions of television's reality only makes clear that perceived reality may be a multi-dimensional concept; the actual dimensions should be inferred as much as possible from children's responses.

In addition, there are good reasons to investigate any such dimensional structure developmentally. Young children have very different viewing habits from older children (Lyle and Hoffman, 1972a, 1972b; Schramm, Lyle, and Parker, 1961); they are less capable of certain cognitive processes involving integration of dimensions or abstract reasoning (Flavell, 1963; Piaget, 1970; Stevenson, 1972); they are not good at developing strategies for processing and storing information, although they do seem able to use strategies given them before they can develop their own (Flavell and Wohlwill, 1969); they are not skillful at selecting relevant from irrelevant plot details (Collins, 1970; Hale, Miller, and Stevenson, 1968; Hawkins, 1973); and they may not understand the sequence of events -- and thus the meaning of the plot -- in simple stories (Collins, 1975; Leifer, et al., 1971; Leifer and Roberts, 1972).

All of this suggests that age or developmental level may be important for perceived reality of television in at least two ways. First, simply saying that children believe television to be less real with age may be a vast and misleading over-simplification. Given the dimensional structures outlined above, developmental changes may take place along some dimensions but not others, or changes may occur at different rates or times on different dimensions. To make things even more

complex, it is quite possible that children's dimensional structures themselves differ with age.

If perceived reality is an important factor in determining children's reactions to television, radical differences in the structure of perceived reality should lead to radical differences in its functioning as well. For example, if the distinction between magic window reality and social expectations were important for older children, while younger children paid attention primarily to distinctions between events and usefulness, perceived reality might be a key variable in locating responses to a television program for one age-group but not the other.

METHOD

Respondents

Questionnaires were answered by 153 children from first, third, and sixth grades (approximate mean ages 6 years, 11 months, 8 years, 11 months, and 11 years, 11 months) from a suburban Wisconsin community and 33 children from a university nursery school in California (mean age 4 years, 9 months).

Measures

Based on the four dimensions outlined above, 30 Likert-type items were developed. As Table 1 illustrates, items referred to one of three levels of Specificity: TV in general, a program type (police shows or family shows), or a named program within one of these types. Questions asked about the reality of the people or the events for everyday life (Context). Crossing these two dimensions within Social Expectations yields 15 intersections; Magic Window contains only 10 because of the inappropriateness of usefulness here. One item was asked for each intersection, except that two items were used at each intersection involving television in general (see Appendix).

Pretesting with the nursery school children suggested that 30 items were far too many, so a preliminary factor analysis was carried out on the responses of the 1st, 3rd, and 6th graders to locate ten items that could be most easily dropped from

the questionnaires. As it turned out, the ten questions about television in general had the lowest commonalities with the factor structure and were dropped.

Procedure

The experimenters in all cases introduced the questionnaire as being designed to "find out what people of different ages think about television." Sixth graders self-administered the questionnaire in a small auditorium with two experimenters present. Third graders responded in their classrooms with an experimenter reading questions and response choices out loud as the children followed along and marked their answers.

For first graders and nursery school children, a different response procedure was used. Following the model of Walster, Berscheid, and Barclay (1967), these younger children were trained in the use of an answer sheet containing five circles increasing in size for each question. Thus, the largest circle might correspond to "very much true", while the second largest would correspond to "pretty much true," and so on. First graders came in groups of 16 to a lunch room and were shown the use of the scales for rating toys and television programs. One experimenter read the questions slowly while another circulated among the children answering questions and making sure that the children were marking the correct line on their answer sheet. For nursery school children, a similar procedure was used, except that the children were individually interviewed by one experimenter in an experimental room at their nursery school.

RESULTS

Preliminary factor analyses in which all factors with eigenvalues greater than one were rotated produced between four and nine factors. To ensure comparability across analyses and to make the factors more meaningful and interpretable, four-factor solutions were forced in all subsequent analyses. Both orthogonal (varimax) and oblique rotations were performed, but because the oblique rotations made little

real difference in factor structures, all factors reported are from orthogonal rotations and are thus independent of each other. Furthermore, even though the discussion of factors has mentioned four potential attributes of perceived reality and four-factor solutions have been forced, it is important to note that the children have not been limited a priori to these specific factors.

Table 1 summarizes the factor structure with all four age groups combined. The first four factors derived from the 20 questionnaire items accounted for 51% of the total variance. The first factor, accounting for 55% of the rotated factor variance, seems to indicate that the most important overall dimension in children's perceptions of television's reality is whether what is seen on television is drama or actual events -- what we labeled Magic Window reality. Six of eight items constructed to reflect this dimension load greater than .40 on this first factor, while none of the other 12 questions do. A second factor, accounting for an additional 27% of the factor variance, falls entirely within what we called Social Expectations -- the degree to which people and events on television are similar to those of the real world. In addition, certain attributes seem more relevant than others. Only six of twelve Social Expectations questions had positive loadings, but these were all questions dealing either with families on television or with television events.

Two final minor factors accounted for the remaining 17% of the factor variance, and their composition further strengthens the significance of the two primary factors. The third factor is based primarily on questions about how useful television characters are for understanding one's own situation, originally conceptualized as a part of Social Expectations. The fourth factor overlaps partially with the strong Magic Window factor, but contains loadings only on questions about whether events seen on television are actually occurring. Taking this sample of four- to twelve-year-old children as a whole, then, it appears that the perceived reality of

television can vary along at least two independent dimensions: the degree to which television is seen as portraying real life instead of fiction, and the degree to which television's characters and events are similar to children's expectations about the real world.

Developmental comparisons along these dimensions should allow for a better picture of the way children's perceptions of television change with age than that provided by the simple statement that children perceive television as less real as they grow older. As shown by the means in Table 2, factor scores on the first and fourth factors (Magic Window) do decrease linearly with age (by planned comparison, $F=62.99$, d.f.=1,182, $p<.01$ for Factor 1, and $F=38.39$, d.f.=1,182, $p<.01$ for Factor 2). For the two factors tapping Social Expectations, however, patterns contrary to previous experience emerged. The planned comparison for linear trend on Factor 2 was significant ($F=18.86$, d.f.=1,182, $p<.01$), but resulted from an <u>increase</u> with age in the degree to which television families and events match children's expectations. A post-hoc comparison confirms that most of this increase occurs between nursery school and first grade, with perceptions relatively stable thereafter ($F=13,94$, d.f.=3,182, $p<.01$). For children's beliefs about the degree to which understanding television people can help them in their own lives no linear trend emerges. Instead, it is the youngest and oldest children who are skeptical of television's potential, while first and third graders see it as relatively useful ($F=5.08$, d.f.=3,182, $p<.01$).

An important limitation on these developmental comparisons is that they are all based on factors derived from combining the overall sample, and these factors necessarily summarize the factor structure of perceived reality over a rather broad and diverse age range. While developmental comparions require us to apply the same yardsticks to each age, it is quite possible that our summary yardsticks are not entirely appropriate for any given age. To the extent that first graders, for example, structure their perceptions of television's reality in a qualitatively different way than that reflected in the overall factor structure, comparisons based

on the overall structure will be less meaningful. This is not to say that a lack of correspondence renders any developmental comparisons meaningless. Knowing that children of different ages do vary along overall factors is important and valuable information, even if these dimensions are not the most salient dimensions for children of a given age. To establish just what is represented by the above developmental comparisons, individual factor structures for each age-group are presented in Tables 3 - 6 and will be compared with the overall structure presented in Table 1.

The first four factors used by the sixth graders (Table 3) account for 54% of the total variance. At first glance, these factors may seem to have very little to do with the overall structure, but a closer examination reveals that while the order of precedence among these factors differs from that in the overall structure, the individual factors themselves are surprisingly similar. Five of the six loadings above .40 for the first factor (52% of rotated factor variance) fall within the a priori category of Social Expectations, especially on questions dealing with police shows. Item loadings on this factor correlate .71 with the third of the overall factors.[1] The second sixth grade factor has five of its seven main loadings with Magic Window reality and correlates positively with both Magic Window factors in the overall sample (.49 with factor 1, .74 with factor 4). The main loadings of the third sixth grade factor seem scattered across Social Expectations items, but it correlates .77 with the main Social Expectations factor in the overall structure. A final factor for the sixth graders does not match any overall factors, seeming instead to focus on questions about family programs.

The factor structure of perceived reality for sixth graders is thus similar to but not identical with the overall structure. As one might expect from the developmental comparions, television as drama or a Magic Window on life seems to be a closed and uninteresting question for sixth graders; thus the two factors of the overall structure are lumped within a single response. Furthermore, the type of program involved (here family or police programs) seems more salient than in the

overall structure. Still, the generally high correspondence between the sixth-grade and the overall factor structure indicates that their place in the developmental comparisons may be taken as presented.

With the factor structure of the third graders, shown in Table 4, the correspondence to the overall structure is striking even at first glance. Here the first four factors account for 51% of the total variance, and even take the same order of precedence as the overall factors with which they correlate .80, .79, .80, and .71 respectively. There thus can be little question that the third graders' place in the developmental comparisons is as it seems.

The four factors of the first graders' factor structure (52% of the total variance), are in slightly different order of precedence than are the overall factors, but the correspondences are again very close. The first three factors here correlate .75, .78, and .82 with the second, third, and fourth factors of the overall structure, while the fourth factor correlates .79 with the first of the overall factors, with the largest other positive correlation a mere .29. Thus, while the Magic Window factors are slightly less salient for first graders than in the overall structure, the individual factors are so similar that their position in developmental comparisons may again be taken at face value.

For nursery school children, however, patterns and correspondences are much less clear. In fact, the lack of difference among the four factors in the amount of rotated factor variance accounted for at first suggests that these factors may have been imposed on random responses. However, because they collectively account for 55% of the total variance, this fear can be discounted. Still, while the factor loadings of Table 6 are rather different than the overall dimensions, there are some moderate relationships among the factor loadings.

The main loadings of the first factor are scattered across Magic Window and Social Expectations, but the loadings of individual questions on this factor are at least somewhat related to loadings on the fourth overall factor, a Magic Window

dimension (r=.53, largest other positive correlation .02). The second nursery school factor is largely based on responses to programs about families, although there is again a weak relationship to the main overall Magic Window factor (r=.45, no other positive correlations). Seven of the eight main loadings of the third factor fall under Social Expectations on questions dealing with the degree to which television people are like real life and the usefulness of television in dealing with one's own problems. Furthermore, the loadings are fairly strongly related (.77) to the Usefulness factor from the overall structure. Finally, the loadings on the fourth factor seem well scattered, with little relationship either to the *a priori* categories or to any of the overall factors (maximum positive correlation .36). For the nursery school children, then, the two Magic Window factors of the overall factor structure used in the developmental comparisons do bear some resemblance to the way these children themselves respond to television, and the Usefulness factor is well-matched. But the second of the overall factors, the degree to which television matches children's Social Expectations, seems not to play an important role in the way nursery school children respond to these questions about television.

DISCUSSION

Given what we know about the potential good and bad effects of television on children's behavior and attitudes (Surgeon General's Scientific Advisory Committee, 1972; Leifer, Gordon, and Graves, 1973), the search for ways to enhance desirable effects and minimize undesirable ones is of the highest priority. Research reviewed earlier in this paper points to the perceived reality of television, the degree to which television is seen as reflecting or resembling the real world, as a potentially important and manipulable variable that can intervene in the child-television relationship.

Lacking a generally accepted explication of perceived reality (and often lacking any explication at all), previous research on perceived reality has employed

many very different operationalizations and manipulations under the label "perceived reality." Thus, we have been in the situation of suspecting that perceived reality is important without having more than a fuzzy idea of what it is or how it works. In particular, there seemed reason to believe that the general concept of perceived reality might in fact be masking a number of subsidiary concepts, each of which could conceivably develop differently, respond differently to manipulations, and differently intervene in television effects.

The research reported here provides some initial insights into this problem. For one thing, it is now clear that the global concept of perceived reality does contain an internal structure. Over the nursery school to sixth grade range questioned here, two key distinctions emerged. First, children's reactions to television vary in the degree to which they perceive television as ongoing life or merely drama, and we labeled this dimension Magic Window reality. Independently of this distinction, children also vary along a second dimension we have named Social Expectations, the degree to which television people and events are similar to real life. Less important, but still a potential source of variation in any intervention, the Usefulness of television people and events in providing information and guidance for everyday life was a third dimension that emerged. A minor fourth dimension was composed of items dealing with the Magic Window reality of television events, and is not terribly distinct from the main Magic Window factor.

Children's responses thus provided strong support for the a priori division of perceived reality into Magic Window and Social Expectations. While the distinctions seemed less crucial, children also distinguished between those particular subjects we labeled Context (people, events, and usefulness). Furthermore, some of the factor analyses at individual grades suggested that children were distinguishing between questions about police programs and family programs.

On the other hand, one dimension previously thought important was not in this study. Although other research has found that the Specificity of questions was

related to the degree of perceived reality reported (Greenberg and Reeves, 1974; Korzenny, 1976), whether questions referred to television in general, police or family programs in general, or to specific police or family programs seemed entirely irrelevant to the factor structure of children's responses both overall and within individual grades. In one sense, Specificity was not given a fair chance: all the questions dealing with television in general were dropped in the change to a questionnaire short enough for nursery school children, leaving a drastically restricted range. Still, that the questions about television in general had the lowest commonalities with the overall factor structure suggests a artifactual interpretation of Greenberg and Reeves' (1974) finding of greater perceived reality with more specific referents. It may simply be that questions about television in general are less meaningful and therefore less answerable.

While the overall factor structure indicates a subdimensional structure that is interpretable in terms of a priori categories, the large age-range involved raises the possibility that the overall structure is an artifact of combining developmentally dissimilar groups. However, the factor structures of the first and third graders match the overall structure very well, and sixth graders deviate only in combining two Magic Window factors into one -- hardly a surprising result when one considers that whether television is drama or a Magic Window is likely to be a closed and uninteresting question for children as old as this. While we thus may have some confidence in the meaningfulness of the overall factor structure and its stability from first to sixth grades, perceptions of television's reality do seem rather different for nursery school children. Their factor structure is not readily interpretable and is only weakly related to the dimensions of the overall structure except on Usefulness.

Taking these similarities into account, we can now confirm that the widely reported decrease in perceived reality with age refers solely to Magic Window reality, the gradual realization that most television programs present fiction and not pictures

of actual events. For the degree to which television characters and events are similar to those of the real world (Social Expectations), no such decrease appeared, although it is possible that a decline does not begin until after age twelve. What is more interesting in these results is that nursery school children believe television to be less like real life than do the other three grades. It is true that the overall Social Expectations dimensions is only weakly related to the nursery school factor structure, suggesting that the degree to which television does or does not match their expectations about life is not terribly important to these children. But even if the distinction is less important for them, it is still clear that nursery school children believe television to be substantially less like real life, a direct reversal of commonly accepted developmental trends revealed by breaking perceived reality down into its component parts. This departure from expected age trends is even more pronounced for Usefulness (which is a relevant dimension for all four age groups). First graders find television characters and events relatively very useful for their own lives and third graders find them somewhat useful, but sixth graders and nursery school children do not find them useful at all -- a curvilinear trend.

What this research has demonstrated is that children's conceptions of television's reality are indeed multi-dimensional in nature. Instead of assuming that perceived reality acts and is acted on in only one way, future research must take this cognitive complexity into account. The developmental trends on the four dimensions already make it clear that television is more or less "real" at different times, depending on the dimension chosen. Assuming a generalized intervention capability common to all dimensions, intervention strategies should vary with age at the very least. For example, an emphasis on the Magic Window unreality of television might decrease television effects with first grade and nursery school children, while messages demonstrating that television is not Useful might be most effective with first and third graders, and so on.

Given the goal of intervening in television effects, an intermediate step for further research will be to develop and test various potential manipulations of perceived reality to see just what sorts of effects they have on individual dimensions of perceived reality. Depending on the target population, for example, one might want either a broad-spectrum manipulation that affected all dimensions or a manipulation that affected only one.

The final major problem for research on perceived reality will be to re-examine the role of perceived reality as a potential intervening variable in light of its subdimensional structure. There is no particular reason why each of the pieces of perceived reality should intervene in television effects in the same way, nor any reason that they all should have power to intervene at all. The subdimensions of perceived reality should, however, allow us to resolve the apparent contradictions in previous research about the intervening or direct effects of perceived reality. The goal should be to separate those dimensions that act as intervening variables from those somehow directly related to the effect or those irrelevant to television effects. Given this, developmental and subgroup differences in the nature of these relationships could be traced, and intervention programs designed that would allow parents and schools to enhance television effects they deem helpful and inhibit those they deem harmful.

Things are much more complex than it seemed when Feshbach (1972) reported that perceiving a presentation as real heightened the effect, while perceiving it as fantasy decreased it. However, while the situation is complex, it is not hopelessly so. Perceived reality of television may be a multi-dimensional concept, but the evidence further suggests that the dimensions themselves do at least remain relatively stable between first and sixth grades. Thus, those who wish to measure or manipulate perceived reality can now do so with some hope that their measurements will have some recognizable meaning.

REFERENCES

Alper, S.W. and Leidy, T.R. The impact of information transmission through television. Pub. Opin. Quart., 1970, 33, 556-562.

Atkin, C. and Miller, M. The effects of television advertising on children: Experimental evidence. Paper presented to the International Communication Association, Chicago, April, 1975.

Ball, S. and Bogatz, G. The first year of Sesame Street: An evaluation. Princeton: Educational Testing Service, 1970.

Ball, S. and Bogatz, G. Reading with television: An evaluation of The Electric Company. Princeton: Educational Testing Service, 1973.

Berkowitz, L., and Alioto, J.T. The meaning of an observed event as a determinant of its aggressive consequences. J. pers. soc. Psychol., 1974.

Bogatz, G.A., and Ball, S. The second year of Sesame Street: A continuing evaluation. Princeton, New Jersey: Educational Testing Service, 1971.

Collins, W.A. Learning of media content: A developmental study. Child Development, 1970, 41, 1133-1142.

Collins, W.A. Children's processing of social information from televised dramatic programs. Paper presented at the biennial meeting of the Society for Research in Child Development, April 1975.

Dysinger, W.S., and Ruckmick, C.A. The emotional responses of children to the motion picture situation. New York: Macmillan, 1933.

Feshbach, S. Reality and fantasy in filmed violence. In J.P. Murray, E.A. Rubenstein, and G.A. Comstock (eds.), Television and social behavior, vol. 2. Washington, D.C.: Government Printing Office, 1972.

Flavell, J.H. The developmental psychology of Jean Piaget. New York: Van Nostrand, 1963.

Flavell, J.H., and Wohlwill, J.F. Formal and functional aspects of cognitive development. In D. Elkind and J.H. Flavell (eds.), Studies in cognitive development: Essays in honor of Jean Piaget. New York: Oxford University Press, 1969.

Gerbner, G., and Gross, L. Progress report on cultural indicators research project (NIMH Grant MH-21196-03), Philadelphia: The Annenberg School of Communications, 1973.

Gordon, T.F. The effects of time context on children's perceptions of aggressive television content. Number 2 of Communication Research Reports, School of Communications and Theater, Temple University, 1973.

Greenberg, B.S., and Reeves, B. Children and the perceived reality of television. Paper presented to the annual meeting of the International Communication Association, New Orleans, April, 1974.

Hale, G.A., Miller, L.K., and Stevenson, H.W. Incidental learning of film content: A developmental study. Child Development, 1968, 39, 69-78.

Hawkins, R.P. Learning of peripheral content in films: A developmental study. Child Development, 1973, 44, 214-217.

Holaday, P.W., and Stoddard, G.D. Getting ideas from the movies. New York: Macmillan, 1933.

Korzenny, F. The perceived reality of television and aggressive predispositions among children in Mexico. Paper presented to the annual meeting of the International Communication Association, Portland, Oregon, April, 1976.

Leifer, A.D., et al. Developmental aspects of variables relevant to observational learning. Child Development, 1971, 42, 1509-1516.

Leifer, A.D., Gordon, N.J., and Graves, S.B. Children and television: Recommended directions for future efforts. Cambridge: Center for Research in Children's Television, 1973.

Leifer, A.D., and Roberts, D.F. Children's responses to television violence. In Television and social behavior, vol. 2. Washington, D.C.: Government Printing Office, 1972.

Lyle, J. Television in daily life: Patterns of use (Overview). In Television and social behavior, vol. 4. Washington D.C.: Government Printing Office, 1972.

Lyle, J., and Hoffman, H.R. Explorations in patterns of television viewing by preschool-age children. In Television and social behavior, vol. 4. Washington, D.C.: Government Printing Office, 1972 (a).

Lyle, J., and Hoffman, H.R. Children's use of television and other media. In Television and social behavior, vol. 4. Washington, D.C.: Government Printing Office, 1972 (b).

Maccoby, E.E., and Wilson, W.C. Identification and observational learning from films. J. abn. soc. Psychol., 1957, 55, 76-87.

McLeod, J.M., Atkin, C.K., and Chaffee, S.H. Adolescents, parents, and television use: Adolescent self-report measures from Maryland and Wisconsin samples. In Television and social behavior, vol. 3. Washington, D.C.: Government Printing Office, 1972.

Noble, G. Effects of different forms of filmed aggression on children's constructive and destructive play. J. pers. soc. Psychol., 1973, 26, 54-59.

Osborn, D.K., and Endsley, R.C. Emotional reactions of young children to TV violence. Child Development, 1971, 42, 321-331.

Piaget, J. Piaget's theory. In P. Mussen (ed.), Carmichael's handbook of child psychology. New York: Wiley, 1970.

Pingree, S. A developmental study of the attitudinal effects of nonsexist television commercials under varied conditions of perceived reality. Unpublished doctoral dissertation, Stanford University, 1975.

Roberts, D.F.; Herold, C.; Hornby, M.; King, S.; Sterne, D.; Whiteley, S.; and Silverman, L.T. Earth's a big blue marble: A report of the impact of a children's television series on children's opinions. Report of the Institute for Communication Research, Stanford University, 1974.

Schramm, W., Lyle, J., and Parker, E.B. Television in the lives of our children. Stanford: Stanford University Press, 1961.

Stein, A.H., and Friedrich, L.K. Television content and young children's behavior. In Television and social behavior, vol. 2. Washington, D.C.: Government Printing Office, 1972.

Steinfeld, J.L. TV violence is harmful. Reader's Digest, April, 1973, 37-45.

Stevenson, H.W. Children's learning. New York: Appleton-Century-Crofts, 1972.

Surgeon General's Scientific Advisory Committee on Television and Social Behavior. Television and growing up: The impact of televised violence. Washington, D.C.: Government Printing Office, 1972.

Walster, E, Berscheid, D., and Barclay, A. A determinant of preferences among modes of dissonance reduction. J. pers. soc. Psychol., 1967, 7, 211-216.

Footnote

[1]One point should be made about the use of correlations among factor loadings here. Any correlation of factor loadings from a single age-group's factor structure with those of an overall structure in which that age-group participated is a close relative to part-whole correlation with a potential for artifactually large positive correlation. On the other hand, because varimax rotations attempt to define dimensions such that each items loads on only one, factor dimensions that are not "truly" similar will tend to be negatively correlated for an artifactual reason. Thus, the correlation coefficients reported must be read heuristically, rather than in terms of amount of variance actually accounted for.

Table 1

Rotated Factor Structure with All Grades Combined --

Shown in Framework of Postulated Structure

Context:		Magic Window		Social Expectations		
		People	Events	People	Events	Usefulness
TV in general						
Police programs	in general	1*	1	3	2	3
	specific programs	1	4			3
Family programs	in general	1	4	2	2	3
	specific programs	1	1	2	2	2

* number indicates which factor this item loaded on. In this case, the question about the Magic Window reality of police officers in general loaded on the first factor. Loadings less than .40 are not shown.

% of total factor variance	Factor
55%	Magic Window reality
27%	Social Expectations, people and events
10%	Social Expectations, usefulness
7%	Magic Window reality, events
51%	-- total variance accounted for

Table 2

Developmental Trends on the Four Overall Factors

Factor	Grade N.S.	1	3	6
Magic Window	.55	.61	-.30	-.63
Social Expectations	-.87	.32	-.04	.27
Usefulness	-.24	.44	.09	-.35
Magic Window Events	.83	.07	-.43	-.19

Table 3

Rotated Factor Structure for Sixth Grade

Context:		Magic Window		Social Expectations		
		People	Events	People	Events	Usefulness
Police programs	in general	2	2	1	1,3	1
	specific programs	1	2	2,3	1	2
Family programs	in general	4	2	3	3	1
	specific programs	2,4		4	4	3

% of total factor variance	Factor
52%	Social Expectations, police. r=.71 with overall #3.
22%	Magic Window. r=.49 with overall #2, .74 with #4.
15%	Social Expectations. r=.77 with overall #2.
12%	Families. Unrelated to any overall factors.
54%	-- total variance accounted for

Table 4

Rotated Factor Structure for Third Grade

Context:		Magic Window		Social Expectations		
		People	Events	People	Events	Usefulness
Police programs	in general	1	4	3	2	3
	specific programs	1	4	2	2	2
Family programs	in general		1,4			3
	specific programs	1			2	

% of total factor variance	Factor
41%	Magic Window reality. r=.80 with overall #1.
31%	Social Expectations, people & events. r=.79 with overall #2.
15%	Social Expectations, usefulness. r=.80 with overall #3.
12%	Magic Window events. r=.71 with overall #4.
51%	-- total variance accounted for

Table 5

Rotated Factor Structure for First Grade

Context:		Magic Window		Social Expectations		
		People	Events	People	Events	Usefulness
Police programs	in general	4		1,2	1	2
	specific programs	1	3	1		2
Family programs	in general	4	3		1	2
	specific programs	4	1		1	1

% of total factor variance	Factor
44%	Social Expectations, people & events. r=.75 with overall #2.
23%	Social Expectations, usefulness. r=.78 with overall #3.
20%	Magic Window, events. r=.82 with overall #4.
13%	Magic Window, people. r=.79 with overall #1.
52%	-- total variance accounted for

Table 6

Rotated Factor Structure for Nursery School

Context:		Magic Window		Social Expectations		
		People	Events	People	Events	Usefulness
Police programs	in general	4	1	3	1	2,3
	specific programs	1	1	1,3	4	3
Family programs	in general	2	1,3	1,2,3	1	3,4
	specific programs	4	2	2		2,3

% of total factor variance	Factor
27%	Magic Window, but scattered. r=.53 with overall #4.
26%	Families, Magic Window. r=.45 with overall #2.
24%	Social Expectations, people & usefulness. r=.77 with overall #3.
23%	Scattered. Maximum r=.36 with overall factors.
55%	-- total variance accounted for

Appendix - Perceived Reality Items

(Items marked with an asterisk are those dropped for poor commonalities)

After The Waltons is over and you're not watching any more, the family on the show is still a family.
Watching people on shows like The Waltons helps me figure out people I know.
Watching police officers on The Rookies helps me understand the police I might meet.
Things that happen on Policewoman might happen to a police department that's not on TV.
Families on TV shows are like families in real life.
Police officers on TV are like police officers you could meet.
The police officers on Barney Miller are like police officers you could meet.
Things that happen to families in TV shows are like things that could happen to other families.
What happens on police shows on TV are things that could happen in a police department that's not on TV.
After a TV police show is over and you aren't watching any more, the police you saw are still busy being police officers.
When a police officer breaks an arm on TV and goes to the hospital, does he have to wear it in a cast after the program is over and you're not watching?
The things that happen to the Bunkers on All In the Family are like things that could happen to other families.
If you went to Hawaii, you might meet Chief McGarett or one of the other Hawaii 5-0 policemen you see on TV.
After Streets of San Francisco is over and you're not watching any more, the criminals who got caught still go to court and have a trial.
TV shows about families help me know how to behave at home.
Watching police officers on TV helps me understand the police I might meet.
When people in families on TV disagree and argue about things, do you think they still disagree when the program is over?
After a show about a family on TV is over and you aren't watching any more, the people on the show are still a family.
Ritchie on Happy Days is like teen-agers in real life.
The things you see on Little House on the Prairie are put together from old home movies made a long time ago.
*Are children on TV like children you know?
*Are grown ups on TV like grown ups you know?
*Television people help me figure out people I meet.
*The people you see on TV shows are just pretending to be who you see.
*The things you see on TV shows are really happening.
*Things that happen on TV are like things that you could see yourself.
*How true is this for you? I can learn about life from what I see on TV.
*When you see someone get killed on TV, can you see them alive on another show?
*If you could reach inside your TV at home, could you touch the people and things you see?
*Things that happen on TV are like things that happen in real life.